



The Diocese of
Southwark

Assistant Secretary to the DAC

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Dear Martyn,

**Selsdon, St John the Divine:
Installation of new heating system**

As you are aware, the above scheme was discussed at the most recent DAC Committee meeting. I now write with DAC feedback.

Introduction

The Committee was informed of the positive Site Visit that happened earlier in the year, the result of which led the parish to decide upon their current proposal - a hybrid air-source pump heating solution. The Archdeacon confirmed he is supportive of this scheme. The parish are commended for taking DAC advice into account and for deciding to back a once-in-a-lifetime opportunity for the parish to 'leap forward' with this type of technology. For the parish to move from gas boiler replacements to this type of technology was acknowledged as a big step for them, and the DAC are aware of the hard work undertaken by the parish in order to be in this position.

In order to reach a fully supportive conclusion so that the application can go to the Chancellor of the Diocese for his (hopefully affirmative) decision, the DAC now requests the application be finalised further in two aspects: the reasons against far infrared heating, and the full details of a proposed installation (pipework, etc).

Options appraisal - electric radiant heating

The DAC noted that, since the discussions at the Site Visit, the application paperwork does not yet give full justification for rejecting far infrared heaters. The DAC letter of 22 Feb 2024, as well as what was discussed on the Site Visit, did give further points for consideration in respect of far infrared heaters. This is technology which, although not 'new' in theory, has been more developed in recent years as to the products available on the market and/or their applicability in churches (as well as research work done to assess suitability for church usage and to disseminate the findings as case-studies).

The DAC therefore advises that the options appraisal should include further consideration of the range of electric radiant heater products, particularly far infrared chandeliers, flat-panels *etc*. The options appraisal in support of the final choice will need to answer to whether the hybrid approach proposed is the most suitable low-carbon way to heat the church, particularly when the building is currently used only for a fairly limited number of hours each week? It may be that the church has plans to increase usage so space heating rather than occupant heating would become more appropriate. Could this be detailed in the parish's justification against far infrared heating options?

It was further noted that the parish - should the usage of the building remain the same - could be paying considerably more for their heating should they continue with the decision to install a heat pump system compared to far infrared heating. These elements will need explanation.

Fluctuations in cost were mentioned by another advisor who had recent experience of a far-infrared heating design. Since bespoke or tailored products can have a high cost-per-unit, such schemes could add up to a large total, so far-infrared is not *always* a cheaper option to install than heat-pumps which are usually thought of as more expensive. This may well be an argument against far infrared heating at St John's, but the Committee were in agreement that a thorough explanation - including potential installation and running-costs - should still be produced by the parish to shore up their reasoning and to thoroughly show they have considered the benefits versus negatives of a potential far-infrared heating scheme. The DAC would like to point the parish to the previous Site Visit notes where far-infrared heating was discussed, as this may be a good basis for discussion/documentation for them to utilise. Essentially, detailed documentation and quotes that provide the context, cost, and case against far-infrared will be important for the parish to produce in order to support their preferred choice.

In order to help the parish with their thinking around this, the DAC would point them to two infrared heating case studies recently published by the Church of England nationally:

St Mary's, Charlgrove in the Diocese of Oxford

(<https://www.churchofengland.org/about/environment-and-climate-change/electric-heating-st-marys-chalgrove>) and

St Matthew's, Kingsdown in Bristol Diocese

(<https://www.churchofengland.org/about/environment-and-climate-change/towards-net-zero-carbon-case-studies/radiant-heating-bristol-st-matthew>).

I have attached the case studies themselves to accompany this letter for reference.

There is also an interesting performance report of the scheme in Bristol, which you may find helpful: <https://www.herschel-infrared.co.uk/wp-content/uploads/2023/11/Inspired-Efficiency-halo-review-summary.pdf>.

As you will read, significant carbon and cost savings are reported for this type of heating system when compared to gas options. Should the parish wish to pursue air source heat pumps, a comparison of carbon and cost output, as well as intended patterns of use would be helpful to see. It would be beneficial that the parish go to providers of these types of heating technologies to obtain quotes to help support their choice and to present the installation and running cost options.

In relation to the Bristol and Charlgrove case-studies above, the respective companies are Herschel (<https://www.herschel-infrared.co.uk/heating-heritage-buildings/churches/>) and Solray (<https://www.solray.co.uk/infrared-radiant-panels/>).

Details of installation

The proposed heating scheme was further discussed. The gas boiler backup was questioned by some as a potentially-unnecessary backup option, but in the grand scheme of things, the Committee agreed that this could be turned off or swapped out, in due course (and is a relatively small cost in comparison the scheme as a whole). One Committee member - who was on the Site Visit - commented that it was understandable that the parish wanted to install an 'insurance' boiler, given any new heating system needs to 'work' well for maintaining continuity of parish life, for the comfort of the building's users, and to be ready for potential emergencies.

In response to the fresh documentation sent in, more detail will be required. More details should be provided as to the pipes that will come with the new system and where they will

run along/under the building. The pipe routing is unclear (e.g. porch, Chapel). Could these routes be made clear? It would be good also to understand the impact of removal of old system and installation of new pipes on the fabric. The Committee would like confirmation that the finish will be 'made good'.

Two further queries/comments were raised on points of detail:

1. The heat pumps have a capacity of 80kW which is less than the heat emitters 111kW.
2. An acoustic survey may be required for the heat pumps as a hit/miss screen may not be adequate

Conclusion

The Committee reiterated its gratefulness to the parish for working well with the DAC in responding to advice and for offering a very practical solution. The DAC commends the church for adopting the hybrid proposal rather than just a boiler replacement, and look forward to receiving further details. The details of the proposal, both in terms of laying out further clear reasoning against a far-infrared heating system, as well as pipework details, impact on the building, controls etc, would be scrutinised via Sub Committee. The parish should note that a Sub Committee will be comprised of a smaller group of DAC advisors who are able to look at further documentation in detail with a view to finessing the final proposal and recommending (should all criteria be fulfilled). This will help expedite the next stage of the process.

With all good wishes,

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cc: *The Revd Younis Francis*
The Archdeacon of Croydon